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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,948	05/31/2001	Tatiana Korelsky	CO2-3	9098

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EXAMINER

BOA, DIHYE A

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/870,948

Applicant(s)

KORELSKY ET AL.

Examiner

Dihye Boa

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 2, 3, 6, 7, 10, and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Boguraev (U.S. Patent 5,799,268).
3. As per claim 1, Boguraev teaches a method comprising:
  - identifying model elements using parts of speech (col. 5, line 6) and frequencies of word (col. 5, line 16) base form (col. 10, line 24) and noun phrases in a document;
  - establishing associations between the model elements using collocations (col. 61, line 29) and textual contexts of the word base forms and noun phrases (morphological analysis, col. 61, lines 27) corresponding to the model elements in the document;
  - validating object models (matching pattern, col. 62, lines 16-23) using collocations and frequencies of word based forms (morphology) and noun phrases and noun phrases in the document, as well as natural language paraphrases of the models (disclose analysis, col. 62, line 1-26).

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4. As per claim 2, Boguraev teaches a method comprising:

- identifying classes using noun base forms and noun phrases frequently occurring in the document (col.39, lines 42-46);
- identifying attributes using adjective base forms (col. 58, lines 14-16) frequently occurring in the document;
- identifying association between classes using verb base forms (morphological analysis) frequently occurring in the document (col.60, lines 41-46).

5. As per claims 3 and 7, Boguraev teaches a method of automatic linguistic processing (col. 12, line 44) of the document.

6. As per claim 6, Boguraev teaches a method comprising:

- declaring associations between classes using collocations (col. 61, lines 28-31) and textual context of the word base forms (morphological analysis) corresponding to the model elements in the document;
- associating attributes with classes using collocations (col. 61, line 22-31) and textual contexts of the word base forms (morphological analysis).

7. As per claim 10, Boguraev teaches the method of:

- detecting any missing model elements (col. 59, lines 13-18) having corresponding word base forms and noun phrases (morphological analysis) that occur with high frequency (detected in the document 61 times) in the document;

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- detecting any missing model elements with corresponding word base forms and noun phrases (morphological analysis) that occur with low frequency (34 times) in the document;
- detecting any missing associations (pattern matching engine detect, col. 60, lines 1-7) between classes or between classes and their attributes corresponding to word base forms or noun phrase forms that collocate in the document;
- verifying the semantic of the model (col. 58, line 24) using descriptive paraphrases in natural language (col. 58, lines 24-27).

8. As per claim 11, it recites the same or similar limitations as claim 1, rejected above, and thus are rejected for the same reasons

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boguraev (U.S. Patent 5,799,268) in view of Altschuler (U.S. Patent 6,330,554).

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11. As per claims 4 and 8, Boguraev teaches all the limitations of claim 1 upon which claims 4 and 8 depends respectively. Boguraev does not teach a notation of the Unified Modeling Language.

Altschuler teaches a notation of the Unified Modeling Language (col. 16, line 15).

Therefore it would have been obvious to a person skilled in the art to combine Boguraev with Altschuler. The suggestion or motivation for doing so would have been is to create a set of semantics and notation that adequately address all scales of architectural complexity.

12. As per claims 5 and 9, Boguraev teaches all the limitations of claim 1 upon which claims 5 and 9 depend respectively. Boguraev does not teach a notation of Entity-Relationship model. Altschuler teaches a notation of Entity-Relationship models (col. 16, line 65 to col. 17, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention to combine Boguraev with Altschuler. The suggestion or motivation for doing so is to map objects having an entity relationship structure.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Boguraev (5,799,268) teaches linguistic analysis, the association between model elements and the validation object models method.

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The Altschuler *et al.* (6,330,554) teaches respectively the automatic linguistic processing and the Entity-Relationship models.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner Dihye Boa, whose telephone number is (703) 305-3498. The examiner can normally be reached on Mon-Fri 8:30am-5:00pm.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits, can be reached on (703) 306-3011. The facsimile phone number for the Technology Center 2600 is (703) 872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dihye Boa

02/01/2005

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER